

SEQUENCE LISTING



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TECH CENTER 1600/2900

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Smith, William D.

<120> DNA ENCODING CANINE VON WILLEBRAND FACTOR AND METHODS
OF USE

<130> UMW-1726CPP/US

<150> 09/132,652

<151> 1998-08-11

<150> PCT/US99/18193

<151> 1999-08-10

<160> 29

<170> PatentIn Ver. 2.0

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catttatttg ttgttaatt gtagcctggt aaagggagggt taatgacttt gatcagtgga 540
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252

258

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Arg Ala Cys Ala Gln Gln Gly Ile Val Leu Tyr Gly Trp Thr Asp His
275 280 285

Ser Val Cys Arg Pro Ala Cys Pro Ala Gly Met Glu Tyr Lys Glu Cys
290 295 300

Val Ser Pro Cys Thr Arg Thr Cys His Ser Leu His Val Lys Glu Val
305 310 315 320

Cys Gln Glu Gln Cys Val Asp Gly Cys Ser Cys Pro Glu Gly Gln Leu
325 330 335

Leu Asp Glu Gly His Cys Val Gly Ser Ala Glu Cys Ser Cys Val His
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Ala Gly Gln Arg Tyr Pro Pro Gly Ala Ser Leu Leu Gln Asp Cys His
355 360 365

Thr Cys Ile Cys Arg Asn Ser Leu Trp Ile Cys Ser Asn Glu Glu Cys
370 375 380

Pro Gly Glu Cys Leu Val Thr Gly Gln Ser His Phe Lys Ser Phe Asp
385 390 395 400

Asn Arg Tyr Phe Thr Phe Ser Gly Val Cys His Tyr Leu Leu Ala Gln
405 410 415

Asp Cys Gln Asp His Thr Phe Ser Val Val Ile Glu Thr Val Gln Cys
420 425 430

Ala Asp Asp Leu Asp Ala Val Cys Thr Arg Ser Val Thr Val Arg Leu
435 440 445

Trp Gly His His Arg Ser Leu Val Tyr Ser Leu Asn Gly Tyr His Val
450 455 460

Arg Met Asp Cys Val Arg Ile Thr Leu Ser Leu Leu Val Arg Leu
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Arg Ile His His Thr Val Met Ala Ser Val Arg Leu Ser Tyr Gly His
480 485 490

Arg Leu His Met Arg Ser Ala Val Arg Arg Ser Leu Thr Thr Leu
495 500

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Ala Arg Phe Ala Glu Glu Ala Cys Ala Leu Leu Thr Ser Ser Lys Phe	565	570	575
Glu Pro Cys His Arg Ala Val Gly Pro Gln Pro Tyr Val Gln Asn Cys	580	585	590
Leu Tyr Asp Val Cys Ser Cys Ser Asp Gly Arg Asp Cys Leu Cys Ser	595	600	605
Ala Val Ala Asn Tyr Ala Ala Ala Val Ala Arg Arg Gly Val His Ile	610	615	620
Ala Trp Arg Glu Pro Gly Phe Cys Ala Leu Ser Cys Pro Gln Gly Gln	625	630	635
Val Tyr Leu Gln Cys Gly Thr Pro Cys Asn Met Thr Cys Leu Ser Leu	640	645	650
Ser Tyr Pro Glu Glu Asp Cys Asn Glu Val Cys Leu Glu Ser Cys Phe	655	660	665
Ser Pro Pro Gly Leu Tyr Leu Asp Glu Arg Gly Asp Cys Val Pro Lys	670	675	680
Ala Gln Cys Pro Cys Tyr Tyr Asp Gly Glu Ile Phe Gln Pro Glu Asp	685	690	695
Ile Phe Ser Asp His His Thr Met Cys Tyr Cys Glu Asp Gly Phe Met	700	705	710
His Cys Thr Thr Ser Gly Gly Leu Gly Ser Leu Leu Pro Asn Pro Val	715	720	725
Leu Ser Ser Trp Arg Tyr His Arg Ser Tyr Arg Ser Leu Ser Tyr Arg	730	735	740
Trp Tyr Ser Ser Asp Leu Tyr Tyr Trp Arg Arg Asp Ile Arg Leu Ser	745	750	755
Gly Leu His Tyr Ala Lys Thr Cys Gln Asn Tyr Asp Leu Glu Tyr Met	760	765	770
Ser Ser Gly Trp Val Ser Gly Tyr Leu Tyr Trp Arg Gly Met Val Arg	775	780	785

850

855

860

Ala Thr Tyr Ser Ala Ile Gly Met Ala His Tyr Leu Thr Ile Asp Gly
865 875

Leu Lys Tyr Leu Phe Pro Gly Glu Cys Gln Tyr Val Leu Val Glu Asp
885 895

Tyr Cys Gly Ser Asn Pro Gly Thr Leu Arg Ile Leu Val Gly Asn Glu
905 915

Gly Cys Ser Tyr Pro Ser Val Lys Cys Lys Lys Arg Val Thr Ile Leu
925 935

Val Glu Gly Gly Glu Ile Glu Leu Phe Asp Gly Glu Val Asn Val Lys
940 950

Lys Pro Met Lys Asp Glu Thr His Phe Glu Val Val Glu Ser Gly Gln
960 970

Tyr Val Ile Leu Leu Leu Gly Lys Ala Leu Ser Val Val Trp Asp His
980 990

Arg Leu Ser Ile Ser Val Thr Leu Lys Arg Thr Tyr Gln Glu Gln Val
1000 1010

Cys Gly Leu Cys Gly Asn Phe Asp Gly Ile Gln Asn Asn Asp Phe Thr
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Ser Ser Ser Leu Gln Ile Glu Glu Asp Pro Val Asp Phe Gly Asn Ser
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Trp Lys Val Asn Pro Gln Cys Ala Asp Thr Lys Lys Val Pro Leu Asp
1060 1070

Ser Ser Pro Ala Val Cys His Asn Asn Ile Met Lys Gln Thr Met Val
1080 1090

Asp Ser Ser Tyr Arg Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr
1100 1110

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1120 1130

Tyr Ser Tyr Thr Ser Ile Gly Asp Tyr Thr Tyr Thr Tyr Asp Thr Ile
1140 1150

Ala Ala Tyr Ala His Val Tyr Ala His His Gly Thr Val Val Ala Thr
1160 1170

1185

1186

1187

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1185 1186 1187

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1185 1190 1195 1200

Val Ala Gly Arg Arg Leu Ala Pro Gly Lys Lys Ile Ile Leu Asn Pro
1205 1210 1215

Ser Asp Pro Glu His Cys Glu Ile Cys Asn Cys Asp Gly Val Asn Ile
1220 1225 1230

Thr Cys Lys Ala Cys Arg Glu Pro Gly Ser Val Val Val Pro Pro Thr
1235 1240 1245

Asp Gly Pro Ile Gly Ser Thr Thr Ser Tyr Val Glu Asp Thr Ser Glu
1250 1255 1260

Pro Pro Leu His Asp Phe His Cys Ser Arg Leu Leu Asp Leu Val Phe
1265 1270 1275 1280

Leu Leu Asp Gly Ser Ser Lys Leu Ser Glu Asp Glu Phe Glu Val Leu
1285 1290 1295

Lys Val Phe Val Val Gly Met Met Glu His Leu His Ile Ser Gln Lys
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Arg Ile Arg Val Ala Val Val Glu Tyr His Asp Gly Ser His Ala Tyr
1315 1320 1325

Ile Glu Leu Lys Asp Arg Lys Arg Pro Ser Glu Leu Arg Arg Ile Thr
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Ser Glu Val Lys Tyr Ala Gly Ser Glu Val Ala Ser Thr Ser Glu Val
1345 1350 1355 1360

Leu Lys Tyr Thr Leu Ile Glu Ile Ile Gly Lys Ile Arg Arg Ile Glu
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Leu Ala Arg Asp Leu Val Arg Tyr Val Glu Gly Leu Lys Lys Lys Lys
1395 1400 1405

Val Ile Val Ile Ile Val Gly Lys Gly Ile Glu Ala Ser Leu Lys Glu
1410 1415 1420

1460

1465

1470

Met Ala Gln Val Thr Val Gly Ser Glu Leu Leu Gly Val Ser Ser Pro
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Gly Pro Lys Arg Asn Ser Met Val Leu Asp Val Val Phe Val Leu Glu
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Gly Ser Asp Lys Ile Gly Glu Ala Asn Phe Asn Lys Ser Arg Glu Phe
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Met Glu Glu Val Ile Gln Arg Met Asp Val Gly Gln Asp Arg Ile His
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Val Thr Val Leu Gln Tyr Ser Tyr Met Val Thr Val Glu Tyr Thr Phe
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Ser Glu Ala Gln Ser Lys Gly Glu Val Leu Gln Gln Val Arg Asp Ile
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Arg Tyr Arg Gly Gly Asn Arg Thr Asn Thr Gly Leu Ala Leu Gln Tyr
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Leu Ser Glu His Ser Phe Ser Val Ser Gln Gly Asp Arg Glu Gln Val
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Pro Asn Leu Val Tyr Met Val Thr Gly Asn Pro Ala Ser Asp Glu Ile
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Lys Arg Met Pro Gly Asp Ile Gln Val Val Pro Ile Gly Val Gly Pro
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His Ala Asn Val Gln Glu Leu Glu Lys Ile Gly Trp Pro Asn Ala Pro
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Ile Leu Ile His Asp Phe Glu Met Leu Pro Arg Glu Ala Pro Asp Leu
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1665 1670 1675

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Arg Gly Ser Ser Ser Ile Ile Ala Ser Tyr Ile Asp Glu Met Lys Ser
1685 1690 1695

Phe Ile Lys Ala Ile Ile Ser Arg Ala Ala Ile Gly Ile Arg Ile Thr
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1765

1770

1775

Ala Val Arg Tyr Val Thr Ser Glu Val His Gly Ala Arg Pro Gly Ala
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Ser Lys Ala Val Val Ile Leu Val Thr Asp Val Ser Val Asp Ser Val
1790 1800 1805

Asp Ala Ala Ala Glu Ala Ala Arg Ser Asn Arg Val Thr Val Ile Pro
1810 1815 1820

Ile Gly Ile Gly Asp Arg Tyr Ser Glu Ala Gln Leu Ser Ser Leu Ala
1825 1830 1835 1840

Gly Pro Lys Ala Gly Ser Asn Met Val Arg Leu Gln Arg Ile Glu Asp
1845 1850 1855

Leu Pro Thr Val Ala Thr Leu Gly Asn Ser Phe Phe His Lys Leu Cys
1860 1865 1870

Ser Gly Phe Asp Arg Val Cys Val Asp Glu Asp Gly Asn Glu Lys Arg
1875 1880 1885

Pro Gly Asp Val Trp Thr Leu Pro Asp Gln Cys His Thr Val Thr Cys
1890 1895 1900

Leu Pro Asp Gly Gln Thr Leu Leu Lys Ser His Arg Val Asn Cys Asp
1905 1910 1915 1920

Arg Gly Pro Arg Pro Ser Cys Pro Asn Gly Gln Pro Pro Leu Arg Val
1925 1930 1935

Glu Glu Thr Cys Gly Cys Arg Trp Thr Cys Pro Cys Val Cys Met Gly
1940 1945 1950

Ser Ser Thr Arg His Ile Val Thr Phe Asp Gly Gln Asn Phe Lys Leu
1955 1960 1965

Met Gly Ser Tyr Ser Tyr Val Ile Ile Ala Asn Lys His Ser Arg Leu
1970 1975 1980

Arg Thr Ile Thr Arg Asn Arg Arg Tyr Ser Ile Ser Ala Gly Val Ile
1985 1990 1995

Tyr Met Lys Ser Ile Gln Val Lys His Arg Gly Leu Ser Val Ile Leu
2000 2005 2010

His Ser Arg Met His Met Thr Val Arg Gly Arg Ile Val Ser Ile Ile
2015 2020 2025

2065

2070

2075

2080

Thr Tyr Gly Leu Lys Gly Ile Lys Arg Glu Asn Gly Ala Asn Asp Ile
2065 2070 2075

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Ala Met Cys Gln Pro Asp Ser Cys His Pro Lys Lys Val Cys Glu Ala
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Asp Cys Gly Cys Thr Thr Thr Thr Cys Phe Pro Asp Lys Val Cys Val
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1992

Ala Ile Glu Cys Arg Cys Ser Pro Arg Lys Cys Ser Lys
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213> *Canis familiaris*

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED DATE 01-11-2011 BY 60322 UCBAW

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Sponholz (1980). The total chlorophyll content was determined by the method of Arar and Johnson (1977). The carotenoid content was determined by the method of Lichtenthaler and Sponholz (1980). The total carotenoid content was determined by the method of Arar and Johnson (1977). The total protein content was determined by the method of Lowry et al. (1951). The total lipid content was determined by the method of Bligh and Dyer (1959). The total carbohydrate content was determined by the method of Dubois and Gilles (1950). The total nucleic acid content was determined by the method of Burton (1956). The total ash content was determined by the method of AOAC (1990). The total moisture content was determined by the method of AOAC (1990). The total dry matter content was determined by the method of AOAC (1990). The total organic acid content was determined by the method of AOAC (1990). The total alkaloid content was determined by the method of AOAC (1990). The total flavonoid content was determined by the method of AOAC (1990). The total phenolic content was determined by the method of AOAC (1990). The total tannin content was determined by the method of AOAC (1990). The total saponin content was determined by the method of AOAC (1990). The total sterol content was determined by the method of AOAC (1990). The total glycoside content was determined by the method of AOAC (1990). The total alkaloid content was determined by the method of AOAC (1990). The total flavonoid content was determined by the method of AOAC (1990). The total phenolic content was determined by the method of AOAC (1990). The total tannin content was determined by the method of AOAC (1990). The total saponin content was determined by the method of AOAC (1990). The total sterol content was determined by the method of AOAC (1990). The total glycoside content was determined by the method of AOAC (1990).

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